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Community research

9th EU-GCC Energy Experts Group meeting

Participation of Gulf States under FP7

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- § The EU programme for research and technological development and demonstration
- § Multi-annual programme (2007-2013)
- § Open to applications from European researchers from all sectors, in collaboration with other European and non-European researchers
- § Established by three key legal texts – the Framework Programme, the Rules for Participation and the Specific Programmes
- § Separate Programmes for non-nuclear and nuclear research



FP7 - Specific Programmes

***Cooperation* – Collaborative research**

***Ideas* – Frontier Research**

***People* – Human Potential**

***Capacities* – Research Capacity**

+

JRC (non-nuclear)

JRC (nuclear)

Euratom



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Cooperation

- Budget: 32.413 billion € (2007-2013)
- Bulk of research funding: collaborative research; also JTI
- 10 themes: Health, FAB, ICT, Nano, Energy, Environment (including climate change), Transport (including aeronautics), Socio-economic sciences and the humanities, Space, Security
- Objective: increasing scientific excellence; networking



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FP7 - participants

1- EU Member States (27)

2- Associated countries (12/13)

3- International Cooperation Partner Countries (**ICPC**):

§ **Countries neighbouring the EU** (Mediterranean Partner Countries, Eastern European and Central Asian Countries)

§ **Developing countries** (ACP, ASIA, Latin America, Oman)

§ **Emerging economies** (e.g. China, India, Brazil, Russia, South Africa)

- Funded

4- Industrialised countries (USA, Canada, N. Z., Gulf States, etc.)

- Funded only exceptionally



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Gulf States

Industrial:

- § the United Arab Emirates,
- § Kingdom of Bahrain,
- § Kingdom of Saudi Arabia,
- § Sultanate of Oman,
- § State of Qatar, and
- § State of Kuwait;

ICPC:

- § Oman



FP7 – International Dimension

- Cooperation: 10 thematic areas: best way to integrate research efforts; also Specific International Actions;
- Ideas: ERC; funding excellence; attract best researchers;
- People: Marie-Curie actions: outgoing and incoming fellowships; networks of research;
- Capacities - International: research needs of third countries: Inco – Nets (for Gulf Region in September 2009).



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Cooperation International participation

1. All themes open to third countries

- § Minimum **3 different** EU Member State (MS) or Associated Countries (AC)
- § Beyond this minimum, all 3rd countries can participate
- § ICPC would **generally** be funded
- § Industrialised countries funded only if indispensable for the project
- § Targeted calls possible



Cooperation International participation

2. **S**pecific **I**nternational **C**ooperation **A**ctions linked to the 10 themes

- § Calls for proposals dedicated to ICPC in each Theme
- § Minimum **4 participants** from different countries: 2 ICPC + 2 MS or AC
- § ICPC participants get funding



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Participation of Gulf States FP6 and FP7

- § In general very low/non existing participation:
 - FP6: 2 projects (UAE; S.A.)
 - FP7: few submissions; one successful (UAE/SMEs)
- § Increased interest/importance of research:
 - Info Day in Riyadh (April 2008)
 - INCO.NET for Gulf Region (09/2009)
 - Part of GCC agenda



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Energy theme

§ Budget: 2,35 billion € (2007-2013)

§ Overall objectives:

- Adapt current energy systems (new technologies)
- Independence: less imported fuels; diverse mix of energy sources, renewable energy, carriers and non-polluting sources

§ Specific Programme on Energy (adopted by Council and EP) :

- Hydrogen and fuel cells
- Renewable electricity generation
- Renewable fuel production
- Renewables for heating and cooling
- CO2 capture and storage technologies for zero emission power generation
- Clean Coal Technologies
- Smart energy networks
- Energy efficiency and savings
- Knowledge for energy policy making

§ Specific research topics established in annual Work Programme



EU Energy Policy - key targets

Conclusions of Council Summit 8-9 March 2007

AN ENERGY POLICY FOR EUROPE

I The answer is 20! By 2020 ...

- 20% reduction in greenhouse gas emissions compared to 1990 levels (30% if global agreement)
- 20% reduction in global primary energy use (through energy efficiency)
- 20% of renewable energy in the EU's overall mix (minimum target for biofuels of 10% of vehicle fuel)

I By 2050 : indicative 60 to 80% reduction in GHG

energy for a changing world



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The EU response to the low-carbon technology challenge ...

AN ENERGY POLICY FOR
EUROPE

European Strategic Energy Technology Plan (SET-Plan)

'Towards a low carbon future'

COM(2007)723

of 22 November 2007

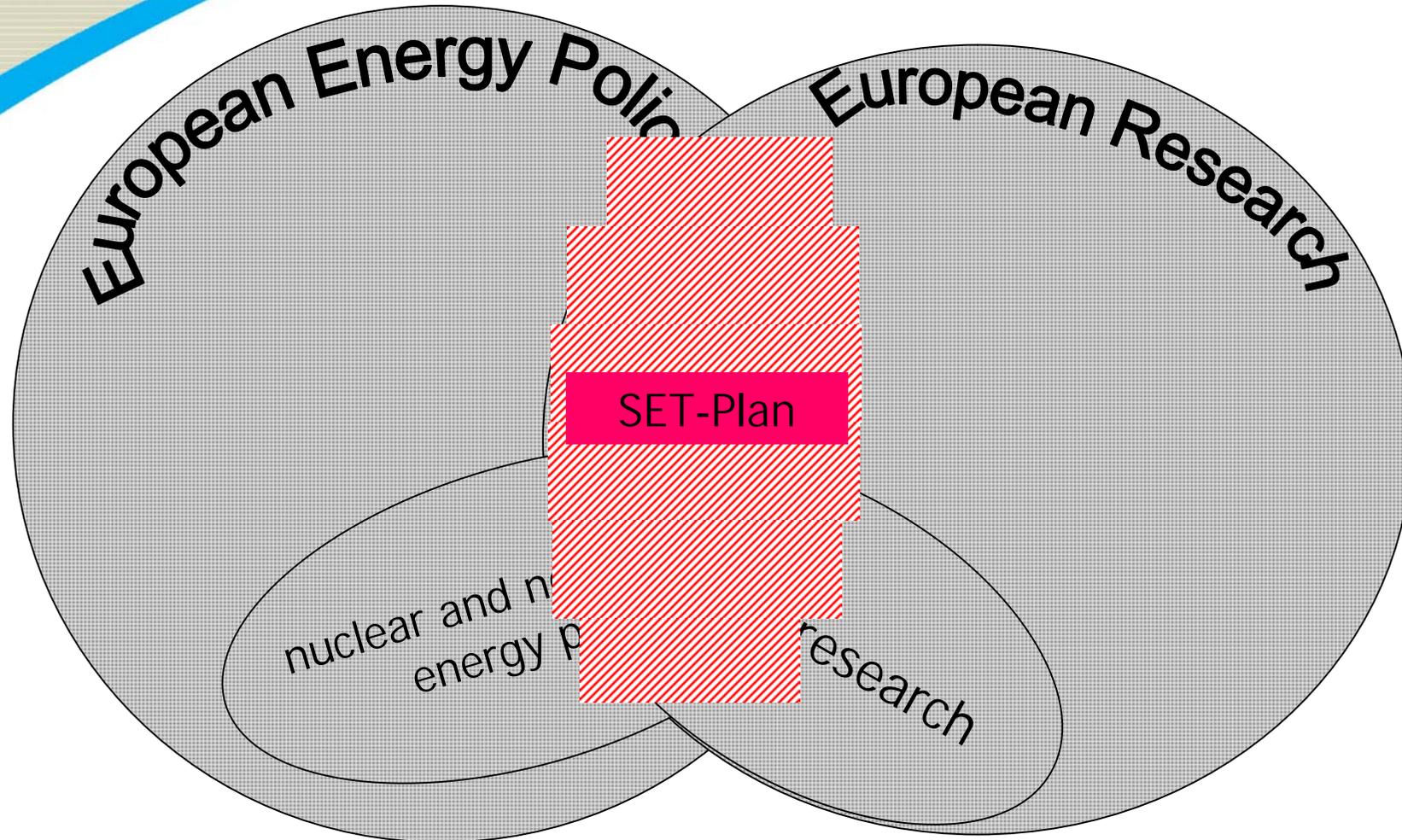
energy for a changing world



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The SET-plan...





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WP Energy 2009

- § Most calls closed!
- § Still some open (see Cordis website)
- § Always check 'call fiche' for conditions/timing



FP7 calls relevant to GCC still open in WP 2009

General opening

ENERGY.2009.2.1.2 :

Solar Photovoltaics:

Manufacturing and product issues for thin-film photovoltaics

ENERGY.2009.4.1.1.:

Low/medium temperature Solar thermal systems for industrial Process Heat

ENERGY.2009.4.5.1.:

Hybrid systems based on solar thermal heating/cooling, backed up by biomass or geothermal to compensate heat load intermittence

ENERGY.2009.7.1.1.:

Optimisation of the electricity grid with large scale renewables and storage

ENERGY.2009.7.3.5 Novel ICT Solutions for Smart Electricity Distribution Networks

ENERGY.2009.8.1.1.:

Energy efficiency in energy intensive industry



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WP Energy 2010

- Work Programme 2010: under preparation (calls 09/2009)
 - § Objectives of research cooperation:
 - support of overall EU policy: SET plan
 - topics of Specific Work Programme
 - § Strong international dimension: common solutions for common problems
 - § Topics: CO₂ capture and storage, electricity grids; solar Europe; wind energy; bio-energy (?)
 - § Breakthrough technologies



FP7 calls relevant to GCC Foreseen WP 2010

General opening

ENERGY.2010.2.1.1: Efficiency and material issues for very thin wafer based c-Si photovoltaics

ENERGY.2010.2.5.1: Dry-cooling methods for multi-MW sized concentrated solar power plants

ENERGY.2010.2.5.2: Main CSP components for high-temperature operation

ENERGY.2010.3.5.1: Liquid or gaseous fuel production using direct biological conversion of solar radiation (This is a pre-competitive topic particularly well suited for cooperation with top class research groups from Third Countries)

ENERGY.2010.10.1.1: Future and Emerging Technologies for Energy Applications (This is a pre-competitive topic particularly well suited for cooperation with top class research groups from Third Countries)

Targeted opening

ENERGY.2010.5.2.3: CCS – site abandonment (open to Carbon Sequestration Leadership Forum – CSLF – members).



SET-Plan & nuclear fission



- Key EU technology challenges for the next 10 years
... to meet 2020 targets:
 - *“Maintain competitiveness in fission technologies, together with long-term waste management solutions”*
... to meet 2050 vision:
 - *“Complete the preparations for the demonstration of a new generation (Gen-IV) of fission reactors for increased sustainability”*
- Priority European Industrial Initiatives to be launched from 2008 onwards:
 - *“Sustainable nuclear fission initiative: focus on the development of Generation-IV technologies”*



EI and Strategic Research Agenda

Reactor Technology Road-Maps

• Current and future Light Water Reactors:

- Plant life Management, material ageing issues
- Advanced modelling tools & intelligent plant monitoring systems

Maintain competitiveness in **fission technologies**

• Generation IV Fast Neutron Reactors:

- Innovative fuels (incl. MA-bearing for transmutation) and core performance
- Improved materials
- Advanced instrumentation, in-service inspection systems

Demonstration of a **new generation (Gen-IV) of fission reactors** for increased sustainability

• Other applications of nuclear energy:

Optimization of reactor design (LWR, HTR, FNR) and heat process applications for production of:

- H₂
- synthetic fuel (2nd gen. biofuels, CtoL)

Nuclear as a **low carbon energy supply** to other industries

Base load electricity



New applications

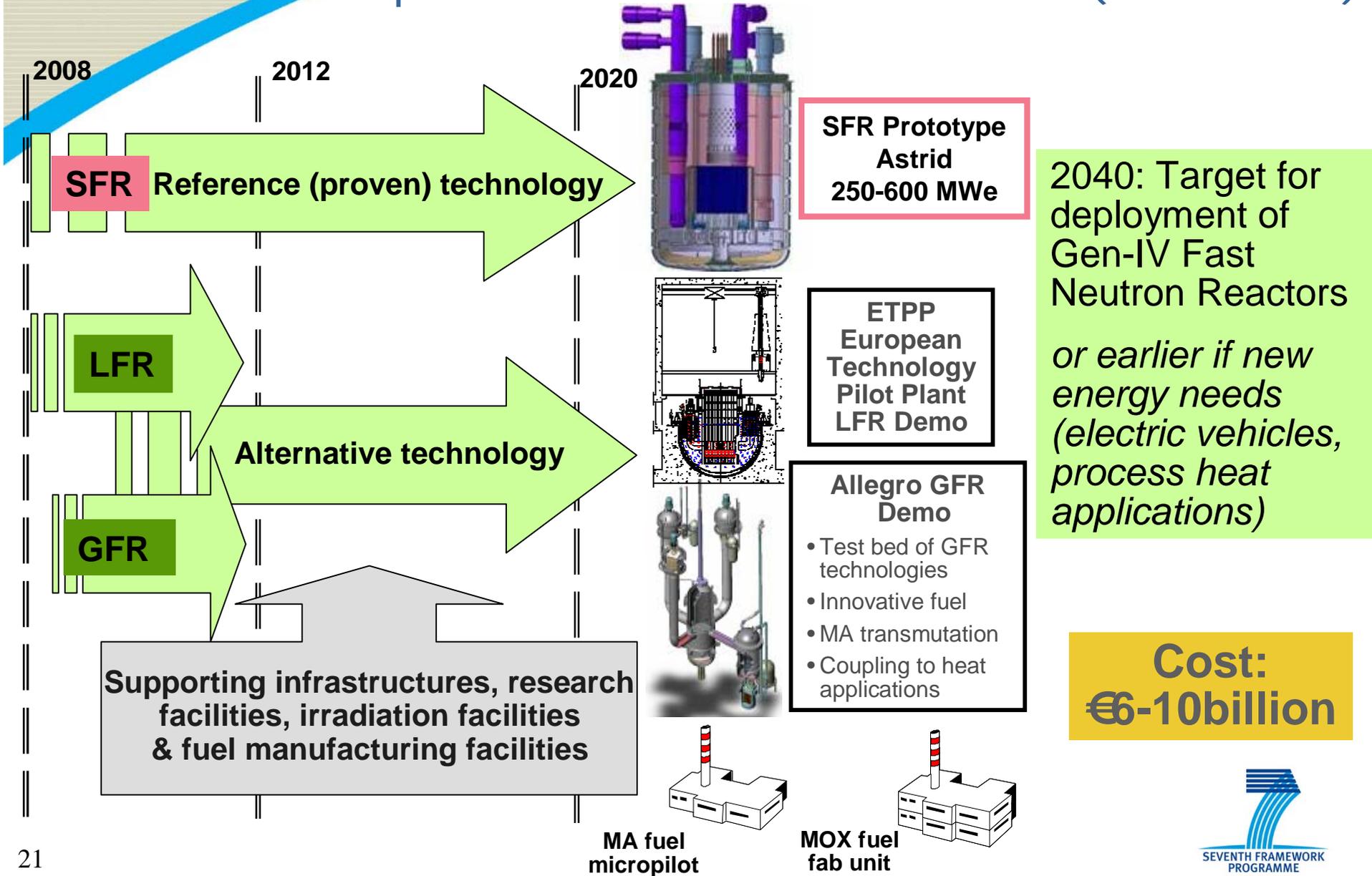




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Gen IV Demonstration Projects: European Industrial Initiative (SET Plan)





10 tips for participating in Framework 7

1. Regard the Framework Program as a means of expanding your organization's R&D rather than as a source of money.
2. Consider whether there is coherence between the research strategy and goals of your industry/company and the objectives of the work the EU wants to fund.
3. Be prepared to accept losses (average success rate 19,5%).
4. Proposal preparation and consortium development should begin before calls open.
5. Build the project consortium from existing networks and relationships. This helps to create trust.
6. Ensure that the consortium has a first-rate coordinator, with a strong scientific reputation, proven organization and project management skills.
7. Read the work program for the call you are interested in carefully.
8. Address all the evaluation criteria and tailor your proposal to what those people assessing your proposals will be looking for.
9. Aim to deliver value for money with a realistic requested budget.
10. Seek advice from your national contact point.



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Information

- EU research: <http://ec.europa.eu/research/>
- Seventh Framework Programme:
http://ec.europa.eu/research/future/index_en.cfm
- Information on research programmes and projects:
<http://cordis.europa.eu/>
- RTD info magazine:
<http://ec.europa.eu/research/rtdinfo/>
- Information requests:
research@ec.europa.eu



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Thank you
for your attention!